

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT****ENGINEERING AND COMPLIANCE****APPLICATION PROCESSING AND CALCULATIONS**

PAGE 1 of 7

APPL. NO.

466442, -43, -44
& -45

DATE:

10/07/09

PROCESSED BY

S. JIANG

CHECKED BY

D. GORDON

EVALUATION REPORT FOR PERMIT TO OPERATE**Applicant's Name:** CAMBRO MANUFACTURING COMPANY Facility ID: 8309**Mailing Address:** P.O. BOX 2000
HUNTINGTON BEACH, CALIFORNIA 92647-2000**Equipment Location:** 7601 CLAY AVENUE
HUNTINGTON BEACH, CALIFORNIA 92648**Appl. No. 466443 – Existing Granulator Unit No. 1**

PLASTIC GRINDER SYSTEM NO. 1. CONSISTING OF:

1. GRANULATOR, 3-KNIFE CUTTER TYPE, CUMBERLAND, MODEL 584, WITH A 20 HP MOTOR.
2. PNEUMATIC CONVEYOR CONSISTING OF A 5 HP EVACUATION BLOWER AND A CYCLONE RECEIVER.

Appl. No. 466444 – Existing Granulator Unit No. 2

PLASTIC GRINDER SYSTEM NO. 2. CONSISTING OF:

1. GRANULATOR, 3-KNIFE CUTTER TYPE, CUMBERLAND, MODEL 584, WITH A 20 HP MOTOR.
2. PNEUMATIC CONVEYOR CONSISTING OF A 5 HP EVACUATION BLOWER AND A CYCLONE RECEIVER.

Appl. No. 466445 – Existing Granulator Unit No. 3

PLASTIC GRINDER SYSTEM NO. 3. CONSISTING OF:

1. GRANULATOR, 3-KNIFE CUTTER TYPE, CUMBERLAND, MODEL 584, WITH A 20 HP MOTOR.
2. PNEUMATIC CONVEYOR CONSISTING OF A 5 HP EVACUATION BLOWER AND A CYCLONE RECEIVER.

Appl. No. 466442 - DE MINIMIS SIGNIFICANT TITLE V FACILITY PERMIT REVISION

REVISION OF TITLE V FACILITY PERMIT PER RULE 301(1)(7).

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PERMIT CONDITIONS

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
3. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS IT IS VENTED TO AIR POLLUTION CONTROL EQUIPMENT WHICH IS IN FULL USE AND WHICH HAS BEEN ISSUED AN OPERATING PERMIT BY THE EXECUTIVE OFFICER.
[RULE 1303(a)(1)-BACT]
4. THE TOTAL AMOUNT OF MATERIALS PROCESSED BY THIS EQUIPMENT SHALL NOT EXCEED 115,000 POUNDS PER CALENDAR MONTH.
[RULE 1303(b)-OFFSET]
5. THE OPERATOR SHALL MAINTAIN ADEQUATE RECORDS FOR THIS EQUIPMENT TO VERIFY COMPLIANCE WITH CONDITION NOS. 4 AND 5 ABOVE. SUCH RECORDS SHALL BE KEPT ON THE PREMISES FOR AT LEAST TWO YEARS AND BE MADE AVAILABLE TO THE EXECUTIVE OFFICER OR HIS REPRESENTATIVE UPON REQUEST.
[RULE 3004(a)(4)]

Periodic Monitoring:

6. THE OPERATOR SHALL CONDUCT AN INSPECTION FOR VISIBLE EMISSIONS FROM ALL STACKS AND OTHER EMISSION POINTS OF THIS EQUIPMENT WHENEVER THERE IS A PUBLIC COMPLAINT OF VISIBLE EMISSIONS, WHENEVER VISIBLE EMISSIONS ARE OBSERVED, AND ON AN ANNUAL BASIS, AT LEAST, UNLESS THE EQUIPMENT DID NOT OPERATE DURING THE ENTIRE ANNUAL PERIOD. THE ROUTINE ANNUAL INSPECTION SHALL BE CONDUCTED WHILE THE EQUIPMENT IS IN OPERATION AND DURING DAYLIGHT HOURS. IF ANY VISIBLE EMISSIONS (NOT INCLUDING CONDENSED WATER VAPOR) ARE DETECTED THAT LAST MORE THAN THREE MINUTES IN ANY ONE-HOUR, THE OPERATOR SHALL EITHER:
 - A. VERIFY AND CERTIFY WITHIN 24 HOURS THAT THE EQUIPMENT CAUSING THE EMISSION AND ANY ASSOCIATED AIR POLLUTION CONTROL EQUIPMENT ARE OPERATING NORMALLY ACCORDING TO THEIR DESIGN AND STANDARD PROCEDURES AND UNDER THE SAME CONDITIONS UNDER WHICH COMPLIANCE WAS ACHIEVED IN THE PAST; OR
 - B. TAKE CORRECTIVE ACTION(S) THAT ELIMINATES THE VISIBLE EMISSIONS WITHIN 24 HOURS AND REPORT THE VISIBLE EMISSIONS AS A POTENTIAL DEVIATION IN ACCORDANCE WITH THE REPORTING REQUIREMENTS IN

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SECTION K OF THIS PERMIT; OR

- C. HAVE A CARB-CERTIFIED SMOKE READER DETERMINE COMPLIANCE WITH THE OPACITY STANDARD, USING EPA METHOD 9 OR THE PROCEDURES IN THE CARB MANUAL "VISIBLE EMISSION EVALUATION", WITHIN THREE BUSINESS DAYS AND REPORT ANY DEVIATIONS TO AQMD.

THE OPERATOR SHALL KEEP THE RECORDS IN ACCORDANCE WITH THE

RECORDKEEPING REQUIREMENTS IN SECTION K OF THIS PERMIT AND THE

FOLLOWING RECORDS:

- A. STACK OR EMISSION POINT IDENTIFICATION;
- B. DESCRIPTION OF ANY CORRECTIVE ACTIONS TAKEN TO ABATE VISIBLE EMISSIONS;
- C. DATE AND TIME VISIBLE EMISSION WAS ABATED; AND
- D. VISIBLE EMISSION OBSERVATIONS RECORDED BY A CERTIFIED SMOKE READER.

[RULE 3004 (a)(4)]

Emissions And Requirements:

7. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

PM: RULE 405, SEE APPENDIX B FOR EMISSION LIMITS

BACKGROUND/HISTORY

Cambro Manufacturing Co (Cambro) manufactures plastic products for the commercial food services industry. Cambro operates two facilities in Huntington Beach. One (facility ID: 8309) is located at 7601 Clay Avenue, which is engaged in the compression molding and injection molding processes. The other one (facility ID: 119021) is located at 5801 Skylab Road, which is engaged in the rotational molding and injection molding processes. Cambro Clay Avenue facility is a Title V facility but not RECLAIM. Cambro Skylab Road facility is a Non Title V and Non RECLAIM facility.

The initial Title V Permit for Cambro Clay Avenue facility was issued on July 3, 2002 and expired on July 2, 2007. The Title V facility permit was last revised in July 2003 as result of the installation of a plastic material grinder (Appl. No. 407233 and PO F59687). A Title V Permit Renewal application was submitted on April 25, 2007, and the renewal permit has not been issued yet.

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On March 15, 2007, Cambro submitted the following applications:

<u>A/N</u>	<u>Type</u>	<u>Previous Permit No.</u>	<u>Equipment</u>
466442	Plan	N/A	De Minimis Significant Title V Permit Revision
466443	PO no PC	N/A	Grinder System No. 1
466444	PO no PC	N/A	Grinder System No. 2
466445	PO no PC	N/A	Grinder System No. 3

Application No. 466442 was submitted as a plan for the de minimis significant revision of the Title V permit as specified in Rule 301.

Application No. 466443 was submitted for an existing grinder system #1. This grinder system is used for re-use the plastic materials. In this grinder system, plastic items are reduced to particles about 5 to 6 mm in size.

Application No. 466444 was submitted for an existing grinder system #2, which is identical with system #1 (A/N: 466443).

Application No. 466445 was submitted for an existing grinder system #3, which is identical with system #1 (A/N: 466443).

PROCESS DESCRIPTION***GENERAL***

Reject plastic products are placed on a belt conveyor leading to the top of the 3-knife granulator. The grinder grinds the plastic pieces into granules about 5 to 6 mm in size. From the granulator, the plastic particles are pneumatically conveyed to a cyclone separator, where exhaust air vented through the top and the plastic granulates is collected into a portable hopper. The exhaust air will be vented to a dust collector under application number 498932.

EMISSION SOURCES

PM emissions are expected from the three grinders and will be controlled by the dust collector.

This facility operates 16 hrs/day, 5 days/wk, and 52 wks/yr.

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EMISSION CALCULATIONS*For each grinding system*

Operation: 16 hrs/day, 5 days/wk, and 52 wks/yr
Throughput (Max.): 5,000 lb/day, or 115,000 lb/month

Assumption:

PM Emission Factor: 1.00 lbs PM/1,000 lb Ground Plastic (default)

PM10 = 50% PM

No PM10 emission control efficiency for the cyclone receiver

Dust Collector control efficiency = 99%

PM Emissions $R1 = (5,000 \text{ lb/day}) (1.00 \text{ lbs PM/1,000 lb}) / (16 \text{ hr/day}) = 0.3125 \text{ lbs/hr, or } 5.00 \text{ lb/day}$ $R2 = (0.3125 \text{ lbs/hr}) (1 - 99\%) = 0.0031 \text{ lb/hr, or } 0.05 \text{ lb/day}$ **PM10 Emissions** $R1 = (5,000 \text{ lb/day}) (1.00 \text{ lbs PM/1,000 lb}) (50\%) / (16 \text{ hr/day}) = 0.156 \text{ lbs/hr, or } 2.5 \text{ lb/day}$ $R2 = (0.156 \text{ lbs/hr}) (1 - 99\%) = 0.00156 \text{ lb/hr, or } 0.025 \text{ lb/day}$

NSR 30 days average:

 $(0.025 \text{ lb/day}) (23 \text{ day/month}) / (30 \text{ days/month}) = 0.02 \text{ lbs/day}$ **EMISSION SUMMARY**

The emissions are summarized for each grinding system, as follows:

Extruder R-100		HOURLY (lbs/hr)	DAILY (lbs/day)	30DAY AVE. (lbs/day)	30 DAY NSR (lbs/day)	ANNUAL AVE. (lbs/yr)
R1	PM	0.313	5.00	3.83	4	1,300.00
R2	PM	0.003	0.05	0.04	0	13.00
R1	PM10	0.156	2.50	1.92	2	650.00
R2	PM10	0.002	0.03	0.02	0	6.50

Daily (lbs/day) = (Hourly, lbs/hr) (16 hr/day)

30-Day Ave. (lbs/day) = (daily, lbs/hr) (23 day/month) / (30 day/month)

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RULE 404 CALCULATIONS:

Assumption:

Pneumatic conveying velocity = 6,000 fpm

Flow rate = (6,000 fpm) (0.5 ft)² (π/4) = 1,178 cfmPM concentration = (0.0031 lb/hr) (7,000 grains/lb) / (60 min/hr) / (1,178 ft³/min) = 0.000307 grains/ft³**RULES AND REGULATIONS EVALUATION**

Rule 212: **Standards for Approving Permits** – The facility is not located within 1,000 feet of a K-12 school. In addition, there are no toxic pollutant emission from each grinding system. A Public Notice is not required.

PM10 emissions increase:

(0.02 lb/day per grinding system) (3 grinding systems) = 0.06 lb/day

Section (g)

Item	Lb/dy daily maximum	Allow limit-lb/dy	Trigger Public notice
NOx	+0	40	No
ROG	+0	30	No
CO	+0	220	No
PM10	+0.06	30	No
SOx	+0	60	No

Rule 401: **Visible Emissions** – Compliance is expected from well maintained and properly operated equipment.

Rule 402: **Public Nuisance** – The potential for public nuisance from the operation of this equipment is minimal. The facility is located in a commercial/industrial area.

Rule 404: **Particulate Matter Concentration** - Table 404(a) allows a maximum concentration of PM 0.1763 grains/ft³ for a discharging rate of 1,178 CFM. The PM concentration in the exhaust air is estimated at 0.000307 grains/ft³. Therefore, compliance is expected.

Rule 405: **Solid Particulate Matter – Weight**

Process weight = 5,000 lb/day, or 312.5 lb/hr

Table 405(a) allows a maximum 1.24 lbs/hr for a process weight of 312.5 lbs/hr. The calculated emission rate of 0.0031 lbs/hr for this equipment is within Rule 405 limits. Compliance is expected.

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Rule 1303(a): **BACT**

The uncontrolled PM10 emissions from the operation of each grinding system is 2.5 lb/day. BACT is required. The BACT requirement for the Bulk Solid Material Handling – Other, Pneumatic Conveying, Except Paper and Fiber, is a Baghouse. (see attached BACT Requirement). Since the dust collector will be installed and in operation at that time, compliance with this rule is expected.

Rule 1303(b)(1): **Modeling****For each grinding system**

The NOx, CO and PM10 emissions from grinding system are below the rule limits (specified in the table A1). Therefore, no further screening analysis is required.

	Allowed lb/hr	Actual lb/hr	Compliance
NOx	0.068	0	Yes
CO	3.7	0	Yes
PM10	0.41	0.002	Yes

Rule 1303(b)(2): **Offsets:** Offsets are not required for this facility since the criteria contaminant emissions will not exceed the limits in table A (rule 1304(d))

	VOC (lb/day)	PM10 (lb/day)	NOX (lb/day)	CO (lb/day)	SOX (lb/day)
Current NSR (PTE)	1	0	3	7	0
A/N 466443	0	+0.02	0	0	0
A/N 466444	0	+0.02	0	0	0
A/N 466445	0	+0.02	0	0	0
Total PTE	1	0	3	7	0
Threshold limit	22	22	22	159	22
Offset required	0	0	0	0	0

Reg XXX: **Title V Permit**

Cambro Manufacturing Co (Facility ID: 008309) has an active Title V permit. Based on the above evaluation, each grinding system will result in an emission increase of PM10. Therefore, application Nos. 466443, 466444, 466445 are considered a De Minimis Significant Permit Revisions of Title V Facility Permit and it is subject to a 45-day EPA review prior to final revision of the Title V Facility Permit (Application No. 466442).

CONCLUSION AND RECOMMENDATIONS

Based on this evaluation, it is expected that the subject equipment will be operated in compliance with all applicable District Rules and Regulations. The Permit to Operate is recommended to be issued.